

National Violent Death Reporting System Coding Manual Version 2

**National Center for Injury Prevention and Control
Centers for Disease Control and Prevention**

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National Violent Death Reporting System Coding Manual Team

The creation of the National Violent Death Reporting System (NVDRS) coding manual has been a collaborative process involving Centers for Disease Control and Prevention (CDC), National Violent Injury Statistics System (NVISS) and InDyne. CDC has taken the lead on developing the case definition, table structure, the document-based architecture of the system, and several new data elements. NVISS supplied most of the data elements and definitions based on an earlier pilot for the NVDRS. The NVISS Child Fatality Module Team developed the Child Fatality data elements that are being piloted in NVDRS. InDyne, Inc., produced the software for the system.

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Table of Contents

Introduction	1
Definitions.	5
Entering a Case Data Structure	13
Data Elements Key	20
Incident Variables	Section 1
Document Variables	Section 2
Person's Identity	Section 3
Death Certificate, Main Elements, Multiple Conditions	Section 4
Abstractor (Type of Death)	Section 5
Coroner/Medical Examiner, Main Elements	Section 6
Suicide or Undetermined Circumstances	Section 7
Homicide Circumstances	Section 8
Unintentional Circumstances	Section 9
Police Report, Main Elements, Circumstances	Section 10
Supplementary Homicide Report	Section 11
Hospital Information	Section 12
Child Fatality Review, Main Elements, Household and	Section 13
Committee Information, Circumstances	
Victim Suspect Relationship	Section 14
Abstractor (Weapon Type)	Section 15
Weapon	Section 16
ATF Trace Information	Section 17
Person to Weapon Relationship	Section 18
Validation Rules	Section 19
Index	

Introduction

Purpose of the Coding Manual

The NVDRS Coding Manual is a reference document to be used by state health departments for defining cases, entering data, and checking data once it is entered. It contains information about individual variables and the way the data are structured. The Coding Manual is intended to be used in conjunction with the materials provided at the coding training and the NVDRS Software Manual. It should be kept at hand when doing data entry or checking, both in the office and in the field. This manual is stored in the software as an Adobe Acrobat.pdf file and will be available at www.cdc.gov/ncipc/profiles/nvdrs/publications.htm. Other material related to setting up a state violent death reporting system can be found in the NVDRS Implementation Manual.

Background on NVDRS

Violence against others or oneself is a major public health problem in the United States, claiming 50,000 lives each year. It is a particular problem for the young: homicide was the second and suicide was the third leading cause of death for Americans 1 to 34 years of age in 2001.

Given the importance of the problem, it is noteworthy that no national surveillance system for violence exists in the United States. In contrast, the federal government has supported extensive data collection efforts for the past three decades to record information about other leading causes of death. For example, the National Highway Traffic Safety Administration has recorded the critical details of fatal motor vehicle crashes, which result in about 40,000 deaths among U.S. residents annually. That system, called the Fatality Analysis Reporting System (FARS), has existed since 1975. The result of that investment has been a better understanding of the risk factors for motor vehicle deaths — information that has helped to target safety improvements that have led to a significant decline in motor vehicle fatalities since the 1970s.

Public health leaders and others are aware of the long-standing gap in information about violence, and have been pressing the need for a national surveillance system for violent deaths since 1989. In 1999, the Institute of Medicine recommended that CDC develop a fatal intentional injury surveillance system modeled after FARS. That same year, six private foundations pooled their funds to demonstrate that data collection about violent deaths was feasible and useful. They supported the National Violent Injury Statistics System (NVISS). NVISS has been administered by the Harvard Injury Control Research Center and includes 12 participating universities, health departments, and medical centers.

In 2000, dozens of medical associations, suicide prevention groups, child protection advocates, and family violence prevention organizations joined a coalition whose purpose was to secure federal funding to extend NVISS-like surveillance nationwide. Congress approved \$1.5 million in funding to start the new system, called the National Violent Death Reporting System (NVDRS), in fiscal year 2002. The first cooperative agreements

were established with six state health departments in September 2002, including: Maryland, Massachusetts, New Jersey, Oregon, South Carolina and Virginia. Additional funding to add more states was made available in fiscal year 2003 and another seven states were funded (Alaska, Colorado, Georgia, North Carolina, Oklahoma, Rhode Island, and Wisconsin). Further funding became available in 2004, and California, Kentucky, New Mexico, and Utah received funding to begin data collection in 2005.

NVDRS Methodology

NVDRS will provide a census of violent deaths that occur within the United States to both residents and nonresidents. The system will define a death due to violence as “a death resulting from the intentional use of physical force or power against oneself, another person, or against a group or community,” which is the World Health Organization (WHO) definition of violence. The case definition includes suicides, homicides, deaths from legal intervention (a subtype of homicide), deaths from undetermined intent, and unintentional firearm fatalities. Deaths of undetermined intent are included because this category includes some deaths with some evidence of intent, but without enough to definitively classify as purposeful. Unintentional firearm injury deaths, otherwise known as accidental, are included because the category includes some deaths that are in fact intentional or undetermined. Legal executions, which are considered part of deaths from legal intervention, are excluded from NVDRS as beyond the scope of public health. (Case definitions are provided in detail with examples in the following section of the manual.)

The system will be coordinated and funded at the federal level but will depend on separate data collection efforts in each state managed by the state health departments. In accordance with the system’s design principles, the data will be incident-based rather than victim-based. The record for an incident will include information about all the victims and suspects, their relationships, and any weapon(s) involved in each incident.

To fully characterize the incidents, states will collect information about each incident from three primary data sources: Death Certificates (DC), Coroner/Medical Examiner (CME) records, and Police Records (PR). A fourth source, crime lab records, will be tapped when a firearm is involved in the incident. (More information about these sources can be found in the NVDRS Implementation Manual.) Most states will find it easiest to begin data collection with death certificates because the state health department itself collects death certificates. At a minimum, 85 unique data elements will be collected for a relatively simple incident like a firearm suicide by an adult. Many additional variables are available as options or for more complicated cases. The data are sorted by source document so the source of each entry can be determined.

Over time, additional data sources that are particularly useful for specific kinds of death may be added to the system. In the first year of NVDRS, for example, some of the funded state health departments tested the availability and utility of data from child fatality review teams, using a module specially designed to take advantage of the detailed information available from that source.

Data collection can be done by either abstraction from the records maintained by the primary sources at their offices or by transfer of data from the primary sources to the health department's NVDRS office. At present, most data must be manually entered into the software. Data collection will be staged so that basic demographic information can be published early and more detailed information about potential causal factors can be published later. Death certificates will probably provide the earliest information, but this may not be the case in every state. Hopefully, certificate information will be available to the health department and entered into the system within six months. Police and CME data are expected to become available within 18 months of the occurrence of the death.

The data are stored in a secure, relational database. Personally identifying variables will not be forwarded to the national database. A list of those variables is available from CDC. The list includes names, social security number, street address of injury and residence, full birth date, source record numbers, and firearm serial number. The software used to enter and transmit the data is described in a separate NVDRS Software Manual. Deaths occurring in 2003 will constitute the first year of data for NVDRS.

Definitions

Centers for Disease Control and Prevention (CDC) has developed these case definitions for NVDRS. States should collect information about all cases that meet these definitions. They may also, however, develop their own, different state definitions. If their definitions are broader than those shown here, states may also enter cases that meet only their case definitions into their database. Reports generated by CDC, however, will include only those cases that meet the CDC definitions. States should cite which definition they are using, state or federal, when they cite their own data.

I. Violent Death

A. Conceptual definition

A death that results from the intentional use of physical force or power, threatened or actual, against oneself, another person, or a group or community. The person using the force or power need only have intended to use force or power; they need not have intended to produce the consequence that actually occurred. “Physical force” should be interpreted broadly to include the use of poisons or drugs. The word “power” includes acts of neglect or omission by one person who has control over another.

In addition, NVDRS captures unintentional firearm deaths. Such deaths are defined in Section IV. D, below.

B. Operational definition to be used in case ascertainment

1. The underlying cause of death must be coded on the death certificate as one of the causes listed on Table 1, and
2. The death of a fetus prior to birth that is caused by violence is not included in the case definition.

II. Resident and Occurrent Violent Deaths

A. U.S. resident violent death

The decedent was an official resident of the United States, including its territories, or a resident of a Native American reservation at the time of injury, according to the death certificate.

B. State resident violent death

The decedent was an official resident of the state (or territory) including those portions of a Native American reservation within the state at the time of injury, according to the death certificate.

C. U.S. occurrent violent death

The initial injury must have occurred within the United States, including its territories, or on a Native American reservation.

D. State occurrent violent death

The initial injury must have occurred within the state or on those portions of the Native American reservations within the state.

Note: The collection of all resident violent deaths is essential for calculating population-based rates. The collection of all occurrent fatal injuries is essential for designing and evaluating prevention efforts focused on specific communities. Usually the state of residence and state of occurrence of a fatal injury will be the same, but every state will have some exceptions. States are expected to collect both violent deaths among their residents, wherever they occur, and fatal violent injuries occurring within their borders irrespective of residence. If the states of residence and injury occurrence are both NVDRS states, the state of injury occurrence is responsible for collecting the information.

III. Preliminary Versus Confirmed Violent Death

A. Preliminary violent death

1. The underlying cause of death has not yet been officially coded using the International Statistical Classification of Diseases and Related Health Problems, 10th Revision (ICD-10); and
2. Review of the uncoded death certificate or official police or coroner/medical examiner (CME) records indicate that the death is likely to be ultimately coded as one of the ICD codes included in the case definition above.

B. Confirmed violent death

The underlying cause of death has been officially coded using ICD-10 as one of the codes included in the case definition above.

IV. Violent Death Types

For public health purposes, violent deaths are assigned to types according to the ICD code assigned to the underlying cause of death indicated on the death certificate by the CME. However, CMEs may not use the same definitions in all states. Therefore, NVDRS will also try to achieve some standardization of death type through these definitions. NVDRS sites should also use these definitions to identify preliminary cases.

A. Suicide

A death resulting from the intentional use of force against oneself. A preponderance of evidence should indicate that the use of force was intentional.

Specific scenarios that should be classified as suicide:

- ~ A person committed a suicidal act, then changed his mind, but still died as a result of the act
- ~ A person intended only to injure rather than kill himself — “Russian roulette” played voluntarily with a firearm
- ~ Assisted suicide involving passive assistance to the decedent, e.g., supplying only means or information needed to complete the act
- ~ Intentional, self-inflicted deaths committed while under the influence of a mind-altering drug taken voluntarily
- ~ Intentional, self-inflicted deaths committed while under the influence of a mental illness

Specific scenarios that should not be classified as suicide: (The preferred NVDRS category is shown in parentheses.)

- ~ The physical consequences of chronic substance abuse, including alcohol or drugs (natural death)
- ~ Acute substance abuse including alcohol or drugs with less than a preponderance of evidence of intent to use the substance(s) against oneself (undetermined or unintentional injury death)
- ~ Death as a result of autoerotic behavior, e.g., self-strangulation during sexual activity (unintentional injury death)

B. Homicide¹

Homicide is defined as a death resulting from the intentional use of force or power, threatened or actual, against another person, group, or community. A preponderance of evidence must indicate that the use of force was intentional. Such deaths resulting from legal intervention are included in a separate category below. Two special scenarios the National Center for Health Statistics (NCHS) regards as homicides are included in the NVDRS definition: (1) arson with no intent to injure a person, and (2) a stabbing with intent unspecified.

Specific scenarios that should be classified as homicide:

- ~ Deaths when the suspect intended to only injure rather than kill the victim
- ~ Deaths resulting from heart attacks induced when someone uses force or power against the decedent
- ~ A death resulting from a weapon that discharges unintentionally while being used to control or frighten the victim — Deaths that result when a person kills an attacker in self-defense
- ~ Deaths labeled “justifiable homicides” where the person committing the homicide was not a police officer
- ~ Deaths that result from a variation of Russian roulette where one person aims a partially loaded gun at another person and pulls the trigger knowing that there was at least some chance that the gun would fire
- ~ Death attributed to “child abuse” without an intent being specified
- ~ Death of a child after birth that results from a direct injury due to violence sustained prior to birth
- ~ Death that results from an intentional act of neglect or omission by one person against another

Specific scenarios that should not be classified as homicide: (The preferred NVDRS category is shown in parentheses.)

- ~ “Vehicular homicide” without a preponderance of evidence of intent to use force against another (unintentional injury)
- ~ Hunting “accident” with a gun (unintentional firearm injury)
- ~ “Accidental” deaths at shooting ranges (unintentional firearm injury)
- ~ A youth kills someone by playing with a gun he believes is unloaded (unintentional firearm injury)
- ~ Deaths that take place in combat in declared or undeclared wars (operation of war)

- ~ Death of a child after birth that results indirectly from violence sustained by its mother before its birth, e.g., a death from prematurity following premature labor brought on by violence (coded as “condition originating in the perinatal period”).

C. Undetermined manner of death

A death resulting from the use of force or power against oneself or another person for which the evidence indicating one manner of death is no more compelling than the evidence indicating another manner of death.

Specific scenarios that should be classified as undetermined manner of death:

- ~ Coroner or medical examiner ruling that states: “accident or suicide,” “accident or homicide,” “undetermined,” “open verdict,” or “jumped or fell”
- ~ Self-inflicted injuries when the records give no evidence or opinions in favor of either unintentional or intentional injury

D. Unintentional firearm injury death

A death resulting from a penetrating injury or gunshot wound from a weapon that uses a powder charge to fire a projectile when there was a preponderance of evidence that the shooting was not intentionally directed at the victim.

Specific scenarios that should be classified as unintentional firearm deaths:

- ~ Celebratory firing that was not intended to frighten, control, or harm anyone
- ~ A person shoots himself when using a gun to frighten, control, or harm another person
- ~ A child less than the age of 6 shoots himself or another person
- ~ A soldier who is shot during field exercises in peacetime
- ~ A person mistakenly thinks a gun is unloaded and shoots himself or another person while fooling around with it
- ~ A child who dies after birth from an unintentional firearm injury that is sustained prior to birth, i.e., in utero

Specific scenarios that should not be classified as unintentional firearm deaths: (The preferred NVDRS category is shown in parentheses.)

- ~ A person unintentionally shoots someone while defending himself against an aggressor (homicide)
- ~ A person unintentionally shoots another person while using a gun to commit a crime (homicide)
- ~ Firearm injuries caused by unintentionally striking a person with the firearm, e.g., by dropping it on their head, rather than with a projectile fired from the firearm (non-firearm unintentional injury)
- ~ Unintentional injuries from non-powder guns (e.g., BB, pellet, and other compressed air or gas-powered guns) (non-firearm unintentional injury)

E. Legal intervention death

A death when the decedent was killed by a police officer or other peace officer (persons with specified legal authority to use deadly force), including military police, acting in the line of duty.

Specific scenarios that should be classified as legal interventions:

~ “Justifiable” and “criminal” homicides meeting the above definition

Specific scenarios that should not be included in the legal intervention category in NVDRS:

~ Legal executions

F. Terrorism-related death

Terrorism deaths are homicides or suicides that result from events that are labeled by the Federal Bureau of Investigation (FBI) as acts of terrorism.

Terrorism is a mechanism of death rather than a manner of death. The manner of such death is either homicide or suicide.

V. Violent Death Incident

Unlike most public health surveillance systems, that are victim-based, the NVDRS is incident-based and reports all victims and suspects associated with a given incident in one record. A violent death incident can be made up of any of the following:

1. One isolated violent death
2. Two or more homicides, including legal interventions, when:
 - a. the deaths involve at least one person who is a suspect or victim in the first death and a suspect or victim in the second death
 - b. the fatal injuries are inflicted less than 24 hours apart
3. Two or more suicides or undetermined manner deaths, when:
 - a. there is some evidence that the second or subsequent death was planned to coincide with or follow the preceding death, and
 - b. the fatal injuries are inflicted less than 24 hours apart
4. One or more homicides or unintentional firearm deaths combined with one or more suicides when:
 - a. the suspect in the first death is the person who commits suicide, and
 - b. the fatal injuries are inflicted less than 24 hours apart
5. Two or more unintentional firearm deaths when:
 - a. the same firearm inflicts two or more fatal injuries, and
 - b. the fatal injuries are inflicted by one shot or burst of shots

Examples of single incidents that involve more than one death:

~ Homicides: A member of Gang A kills a member of Gang B, and Gang B reciprocates, all during a street brawl. (The members of Gang A are suspects in the first killing, and one of them becomes the victim in the second.)

- ~ Homicides: A man kills his family and then drives to work to kill his supervisor. (The suspect in the first homicide is also the suspect in the second homicide.)
- ~ Homicide and legal intervention: Police kill a suspect as he flees the scene of a homicide. (The first suspect is the victim in the second death.)
- ~ Suicides: An elderly couple voluntarily commit suicide together. (The deaths were planned to coincide.)
- ~ Homicide-suicide: A man kills his wife at home and then kills himself 12 hours later when pulled over by the police.
- ~ Unintentional firearm-suicide: A boy unintentionally kills his father while hunting and immediately shoots himself out of guilt.

Examples of separate incidents:

- ~ Homicides: A sniper kills a person and two days later returns to the same location and kills another person (more than 24 hours apart).
- ~ Suicides: Two teenagers agree to commit suicide on the same day. One kills himself a week after the first victim dies (more than 24 hours apart).
- ~ Homicide-suicide: A woman learns that her son has murdered her husband. She kills herself from grief. (The suspect in the first death is not the person who commits suicide.)

Note: Decisions about whether two or more deaths belong to the same incident should be based on the timing of the injuries, rather than the timing of the deaths.

VI. Resident and Occurrent Violent Death Incidents

A. Resident incident

The majority of the deaths must be resident violent deaths. If no jurisdiction accounts for the majority of victims, the incident would be a resident incident for the jurisdiction of residence of the first victim.

B. Occurrent incident

The majority of fatal injuries must be occurrent fatal injuries. If no jurisdiction accounts for the majority of fatal injuries, the incident would be an occurrent incident for the place of injury of the first victim.

Note: The responsibility for abstracting a violent death falls on the state where the incident occurred irrespective of where the victim was a resident or died. NVDRS states should cooperate whenever possible by sending records to the state with responsibility for abstraction when incidents cross state lines. However, NVDRS states should also try to abstract the complete incident if one of their own residents dies violently in a state that is not currently part of NVDRS.

VII. Data Year

A. Year of a violent death

The year of death is the calendar year in which the victim died. So, for example, if a victim was injured at the end of December 2002, but died in early January 2003, the death would be reported in the 2003 data year. Although the NVDRS software allows for specific month or date of death to be entered as “Unknown,”

the year of death must be filled in. In the case of a true unknown year of death (as in skeletal remains with unknown year of death, or an unattended death that may have occurred either shortly before or shortly after January 1), enter the year in which the body was found as the year of death.

B. Year of a violent death incident

The year of a violent death incident is the first year in which any of the victims in the incident died. For example, the only exception to this rule occurs when any of the deaths occurred in a year prior to 2003, the first year of NVDRS. In that case, place the incident in the first year of death after 2002. In other words, incidents with deaths in 2002 and 2003 should be placed in 2003. Incidents with deaths in 2002 and 2004 should be placed in 2004. Incident with deaths in 2003 and 2004 should be placed in 2003.

VIII. Violent Death Rate per Year

The violent death rate per year is the number of resident violent deaths recorded during the calendar year divided by the resident population of the jurisdiction, as defined in official U.S. Census figures, and multiplied by 100,000 for a rate per 100,000 population. Preliminary rates include both preliminary and confirmed deaths. Confirmed rates include only confirmed deaths. Intercensal state population estimates may be used for intercensal year rates when official U.S. Census figures are not available. Whether U.S. Census or state estimates are used, the state should specify the source of the population estimate.

Table 1: ICD-10 External Causes of Death Codes for Manners of Death Meeting the NVDRS Case Definition

<u>Manner of Death</u>	<u>ICD-10 Codes</u>	
	<u>Death <1 year after the injury</u>	<u>Death >1 year after the injury</u>
Intentional self harm (suicide)	X60–X84	Y87.0
Assault (homicide)	X85–X99, Y00–Y09	Y87.1
Event of undetermined intent	Y10–Y34	Y87.2, Y89.9
Unintentional exposure to inanimate mechanical forces (firearms)	W32–W34	Y86 determined to be due to firearms
Legal intervention excluding executions, Y35.5	Y35.0–Y35.4 Y35.6–Y35.7	Y89.0
Terrorism	U01, U03	U02

End Notes

Use of the term “homicide” can be a point of confusion in a violent death reporting system. The term literally means the killing of one person by another, whether intentionally or unintentionally. Law enforcement and many CMEs adhere to this broader definition of homicide and therefore refer to unintentional car crash deaths as “vehicular homicides,” and the unintentional death of a person that results from another’s negligence as “negligent homicides.” Examples of the latter category are unintentional shootings of one person by another (as in two 12-year-old boys playing with a gun they believe is unloaded) and negligent acts by a caretaker of a dependent person (as in a toddler who is left unattended in the bathtub briefly while its mother answers the phone). The ICD system, on the other hand, uses the term homicide in its narrower sense to indicate the intentional or assault-related killing of one person by another. The NVDRS also uses this narrower definition of homicide.

The disjuncture between the law enforcement and public health uses of the term homicide can lead to coding problems. The ICD system is the basis for coding underlying cause of death on the death certificate. However, the code is chosen based on the information supplied by the CME on the death certificate. So, for example, in the case of the 12-year-old boys playing with the gun they mistakenly believed was unloaded, the CME is likely to code the manner of death as “homicide” and supply only medical information in the text fields for underlying cause of death. The information regarding the unintentional nature of the shooting will be available only in the narrative report, not on the death certificate itself. The Vital Statistics coder will likely code the case in the homicide range, not the unintentional range, because the information that would place it in the unintentional range according to ICD protocols is not available on the death certificate. This confusion in terms is one reason that the NVDRS has chosen to include the abstractor-assigned “Type of Death” code in the reporting system. This code applies a uniform protocol to categorizing violence-related homicides, unintentional deaths, suicides, and deaths of unknown intent.

One useful piece of information when attempting to distinguish a violence-related homicide from a negligent homicide is to check how the case was reported on the Supplementary Homicide Report form. Violence-related homicides are reported as “1A – Murder/non-negligent manslaughter” offenses, while unintentional homicides (e.g., “accidental” shooting while hunting, children playing with a gun) are coded as “1B – Negligent manslaughter” offenses. See: Barber C, Hochstadt J, Hemenway D, Azrael D. Underestimates of unintentional firearm fatalities: Comparing Supplementary Homicide Report data with the National Vital Statistics System. *Injury Prevention* 2002;8:252–6.

Entering a Case Data Structure

An incident involving one or more violent deaths is the unit of surveillance in NVDRS. To understand how all the variables fit together in one incident, it may be helpful to think of them in a hierarchy with four levels:

- The first, or incident level, is information about the incident to be described, such as how many people were involved and a narrative of the event.
- The second, or component level, divides the incident into its components: the documents, people, relationships, and weapons involved.
- The third, or data-source level, divides each component into the sources contributing to it (e.g., information about a person from the death certificate, from the police, from the CME).
- The fourth, or additional-element level, divides information from a given source into logical subsets on separate screens when all the elements cannot fit on one screen.

In outline form, this hierarchy looks like the following:

I. Incident

- A. Documents used
- B. Person(s), (victims, suspects, or both) involved
 - 1. Multi-sourced identity or demographic
 - 2. Death certificate (DC)
 - a. Main elements
 - b. All listed causes of death (“multiple causes”)
 - 3. Coroner/Medical Examiner (CME)
 - a. Main elements
 - b. Circumstances
 - 4. Police Reports (PR)
 - a. Main elements
 - b. Circumstances
 - 5. Supplementary Homicide Reports (SHR)
 - 6. Hospital Information (HOSP)
 - 7. Child Fatality Review (CFR)
 - a. Main elements
 - b. Household and Committee Information
 - c. Circumstances
 - 8. Abstractor-completed
- C. Victim-suspect relationships
 - 1. Coroner/Medical Examiner
 - 2. Police
 - 3. Supplementary Homicide Report
- D. Weapon(s) involved
 - 1. Abstractor
 - 2. Bureau of Alcohol Tobacco Firearms and Explosives (ATF) trace information

3. Coroner/Medical Examiner
4. Police
5. Crime lab
- E. Person-weapon relationships
 1. ATF-Firearm trace information
 2. Coroner/Medical Examiner
 3. Police
 4. Supplementary Homicide Report

Note: Not every part of the outline can be completed for every incident. If the incident is an isolated suicide, there will be no victim-suspect relationship. If one of the persons involved is a suspect who did not die in the incident, there will be no death certificate information for that person. If the weapon was not a firearm, there can be no information from ATF, and there will be no crime lab information. The structure is designed to handle all types of violent deaths. It allows the use of data from the four primary data sources (death certificate, police, CME, and crime lab) and three additional ones (hospitals, supplementary homicide reports, and child fatality review teams), and provides places for input from the abstractor.

Variable or Data Element Priority

Given all the data entry fields available to handle various scenarios, and that there is a place to put each data item from each data source, the number of data entry locations is large, approximately 600. Not all the variables are required. Data collection from hospitals, supplementary homicide reports (SHRs), and Child Fatality Review (CFR) is optional (unless a state is being funded to pilot test an optional source). Collecting information about the source documents is optional. In addition, some variables from the primary data sources are considered to be of lesser importance for surveillance purposes and are also optional.

Each data element falls into one of three priorities: Early Required (ER), Late Required (LR), or Optional (O). These are sometimes referred to as 1st, 2nd, and 3rd priority, respectively. All states should complete the required variables. Early required variables are those from the death certificate primarily and should be completed within six months of the date of death. Late required variables are primarily from the other sources and should be completed within eighteen months of the date of death. Optional variables can be completed at any point prior to the close of the data year. The priority for each data element is shown in the body of the Coding Manual. The priority of an element is reflected in the color used for the variable label in the data entry screens. Note that a given variable may have different priorities depending on the source from which it is derived. For example, race is an early required (first priority) variable obtained from the death certificate, but late required (second priority) variables are derived from other data sources, which tend to be available later than the death certificate.

The Data Source Concept

The strength of NVDRS is its use of multiple, complementary data sources. Given that data would be obtained from multiple sources, each with its own documents, and that data might be entered from one source about an incident before the information is

available from a second source, NVDRS was designed to keep the data sorted by source. The idea is that NVDRS staff can capture the information available in a given location for a set of incidents and move on to another office, where the information available there is added to those incidents. This process can be repeated until the incidents are complete.

The table below shows the sources from which data on different topics is to be recorded.

Data Topic	DC	CME	PR	SHR	CFRT	LAB	ATF	USER
Case status								X
Number of persons and weapons								X
Incident narrative		X	X		X			
Document tracking								X
Person type (victim/suspect)	X	X	X	X				
Name, address	X	X	X					
Age/sex/race/ethnicity	X	X	X	X				
When and where (injury/death)	X	X	X					
Cause of death ICD code(s)	X							
Manner of death	X	X			X			X
Additional person descriptors	X	X	X		X			
Alcohol and drug tests		X						
Wounds		X	X					
Associated circumstances		X	X	X	X			
Victim-suspect relationship		X	X	X				
History of victim abuse		X			X			
Suspect was victim caretaker		X	X		X			
Weapon type								X
Firearm trace							X	
Firearm descriptors		X	X			X		
Poison details		X	X					
Weapon used by/on person		X	X	X				
Person purchasing firearm			X				X	

DC=Death Certificate; CME=Coroner/Medical Examiner; PR=Police Report; SHR=Supplementary Homicide Report; CFRT=Child Fatality Review Team; Lab=Crime Lab; ATF=Bureau of Alcohol, Tobacco, Firearms, and Explosives. Note: The hospital source was left out of the table to save space. It only captures whether inpatient or Emergency Department (ED) care occurred and what International Classification of Diseases (ICD) codes were assigned. Tabs in the application mark the places where data from each source document can be entered.

In addition to allowing independent entry of each source, this approach allows for later review of what each source contributed and for identifying missing sources. It increases the validity of comparisons between years and states by allowing comparisons of data from the same sources. It also allows the generation of reports back to the sources showing exactly what their records contained. Eventually, once data source documents are standardized nationally, it can also facilitate direct importation of data.

Primacy Among Data Sources

Data sources may not always agree about every fact of a given incident. A way to identify what is likely the best available information among different sources is needed. Therefore, the data sources have been ranked in terms of their likely accuracy for each data element. The term used for the ranking is “primacy.” The source with 1st primacy is considered most reliable for a given variable and will be the source of choice. Lower primacy sources are the most reliable after 1st primacy and can be used when a higher-primacy source is not available. For example, sex of the victim is taken first from the death certificate, second from the CME, and finally from the police.

States will retain all the data and can determine their own primacy in their state-specific analysis files. States may even choose to use different primacy rankings for different parts of the state or different time periods. However, for nationwide comparisons, the CDC will use the primacy ranking built into the software. The primacy of each source for each variable to which it applies is shown in the “Primacy” column of the coding manual’s variable section.

When different sources have complete but discordant data, the simplest approach is to use primacy. This is probably adequate for surveillance purposes. For research purposes, however, states may elect to settle such discordance by case-by-case review to identify the preferred source for each discordant field.

Auto Filling Across Data Sources

Because much of the information collected will be the same in multiple data sources for one incident, the software will save time by automatically filling blank fields across sources for a given data element. To avoid using automatically-filled data when the actual data is missing for a given source, “auto filled” data has to be confirmed or accepted by the data-entry person. Auto filled data can also be overwritten by the actual data when the two sources differ.

Additional Features

Data are coded whenever possible to avoid problems with variant spellings. A number of range and logic edits exist that can be applied to the case upon completion. Users can generate a number of reports about the data to search for specific incidents or people or to get a preliminary look at the aggregate data.

Steps in Starting an Incident

Step 1: Decide what constitutes an “incident.”

See the definition of an incident in the definitions section of this coding manual. This is mostly a process of deciding whether deaths that are connected in some way belong in the same incident or different ones.

Step 2: Open a new incident in the software.
(Refer to the Software Manual for instructions.)

Step 3: Decide who should be included in the incident and enter that number on the first screen.

The software initially asks how many people are to be covered in the incident. People in the incident may be fatally injured victims, suspects in their deaths, or both victims and suspects. Identifying the victims in the incident is not difficult once you have determined how to define the incident. Identifying how many suspects to include is more difficult. There are no suspects for isolated suicides and self-inflicted unintentional firearm deaths. For homicides, include as suspects people who are listed by the police or the CME as suspects. For unintentional firearm deaths that are not self-inflicted, include the person who fired the weapon as a suspect and anyone else listed by the police as a suspect. A person does not have to be arrested or identified to be listed as a suspect. As long as the number of persons involved in the death is known, (e.g., police report that the victim was stabbed by two men), list each as a suspect, even if nothing further is known about them. See the Person Type variable on the Identity panel in the coding manual for further details and examples.

Step 4: Decide how many weapons to include in the incident and enter that number.

The concept of a weapon in NVDRS combines the concepts of things used to injure and actions that lead to injury. Weapons can therefore range from instruments everyone would call a weapon, such as a gun or bayonet, to actions such as setting fires, pushing someone over a cliff, or shaking (as in shaken baby syndrome). Additional descriptive data elements exist only for firearms and poisons.

Because details are collected only about firearms and poisons, enter each one involved in the incident as a separate weapon. For all other weapon types involved in a violent death, list the weapon only once per incident. For example, if multiple sharp objects or knives are used to kill one or more persons in an incident, enter only one weapon to represent all these sharp objects. If multiple knives and multiple blunt objects are used, one “sharp instrument” and one “blunt instrument” weapon should be entered.

If a gun is not recovered, but the victim died of a gunshot wound, code the number of weapons as “1”. Similarly, if a knife is not recovered, but the victim died from wounds inflicted by a sharp object, code the number of weapons as 1. Guns on the scene that were not used to shoot the victim (e.g., a gun on the person of the victim), are not counted as weapons in the incident. Similarly, poisons or drugs on the scene that were not ingested in a drug overdose are not counted. Basically, anything that injures the victim is counted as a weapon even though it was not described as the “cause of death”.

Step 5: Determine the number of documents to be used for the incident and enter that number.

Note: Information about, and the number of documents, does not have to be entered to open a case. If states choose to use these fields as logbooks or ways to track the completion of a case, the following information may prove helpful:

A document was conceived as a piece of paper or a computerized record that contains information that is used to complete an incident. References to a document within another document would usually not be counted as a separate document. The minimum expected number of documents per incident is three: a death certificate, a police report,

and a CME report. Two deaths in one incident would have a minimum of five documents: two death certificates, two CME reports, and a police report. This is assuming that the police described both deaths in the incident in one report.

States can count multiple reports contained within a CME or police file as part of one document. Such files often contain autopsy reports, toxicology reports, gun traces, and the like. States can also record each of these documents separately, at their discretion.

Once these steps are completed, the software will set up the appropriate number of blank screens so that the incident can be captured. The user can then complete the case, one source document at a time. The next section of the coding manual provides details about the data elements to be completed.

Throughout the manual a standard approach is used to code 'Unknown'. For numerical fields, the numbers '9', '99', '999', etc. are mostly used to indicate 'Unknown'. Similarly, the numbers '8', '88', '888', etc. are usually used for 'Not applicable'. It is suggested that 'Unk' be entered for 'Unknown' in any relevant text field.

Reabstraction Guidelines

Reabstraction of cases is probably the most important quality control measure of NVDRS. It is far superior to reviewing completed incidents without access to the original source documents. The primary purpose of reabstraction is to identify errors in the coding of key data sources in a timely way. A secondary purpose is to identify data fields that have low reliability, i.e., they are not completed in the same way by trained independent observers in a significant percentage of incidents, perhaps because of their inherent subjectivity.

We suggest the following reabstraction guidelines:

1. Reabstraction should be done by the person who is most skilled in coding. This need not always be the supervisor. It should not be done by the same person who did the original coding.
2. The reabstractor should have access to all the original records used by the original abstractor.
3. The reabstractor should not have access to the original abstractor's paper or electronic abstraction when they reabstract the incident. Preferably, to reduce the chances that they will be biased by the other person's interpretation, they will not have read the original abstraction before doing the reabstraction.
4. The reabstractor should reabstract ten percent of incidents completed in the previous quarter or previous month. By completed incidents, we mean incidents that have had data entered from the death certificate, police record, and CME record.

5. Reabstractors should select the incident numbers of the incidents they want to reabstract along with the necessary identifiers before going into the field. We suggest using the Reports/Search by/Incident ID report in the application to create a list of incident IDs from which to select. Eliminate from the list those incidents that have more than two people listed in the report because it will not be possible to determine which person in the original abstraction was intended to correspond to which person in the reabstraction otherwise. Such matching can be done with only one person in the incident or with two people, one victim and one suspect.
6. Initially, it is suggested to select every ninth completed record to have a few backup incident numbers in case some original records are temporarily unavailable. Over time, experience will suggest the sampling fraction that will result in successful completion of ten percent.
7. Reabstraction should start soon after the end of the first quarter of data collection and be done on an ongoing basis so that feedback to abstractors is timely.
8. Reabstractors should open a new incident for every reabstraction. The incident should be put in the 2002 database so that it never becomes an unwanted duplicate in the current year's file.
9. Note also that you should not select incidents to reabstract that have not been checked in from a laptop because their incident number may change when they are checked in.
10. Reabstractions will be sent to the CDC along with all other incidents in the routine way. CDC will link the originals with their reabstractions and calculate concordance using kappa statistics for all coded fields that have been completed by either abstractor.
11. State supervisor/reabstractors will want to compare their results with the original abstractions themselves manually by printing an incident or by setting up queries to do record comparisons for specified pairs of incidents. Any discrepancies noted should be reconciled through discussion with the original abstractor.
12. It is important to distinguish between the two possible sources of error: true coder disagreement and data entry error. Retraining or clarification of coding instructions may help with coder disagreement, while changes in question format may help with data entry error.

Note: Do not reabstract incidents that have not been checked in from a laptop because their incident number may change when they are checked in.

Data Elements Key

The next sections provide detailed information for each data element captured by NVDRS. The sections are organized by screens as they appear in the NVDRS software application. Within each section, the data elements are arranged by location on the screen. Each data element or group of related data elements begins on a new page and follows the format below:

The header refers to the screen path of the variable.

Variable Label: **Variable Name**

Name **Definition**

Variable Name Definition of variable

Uses

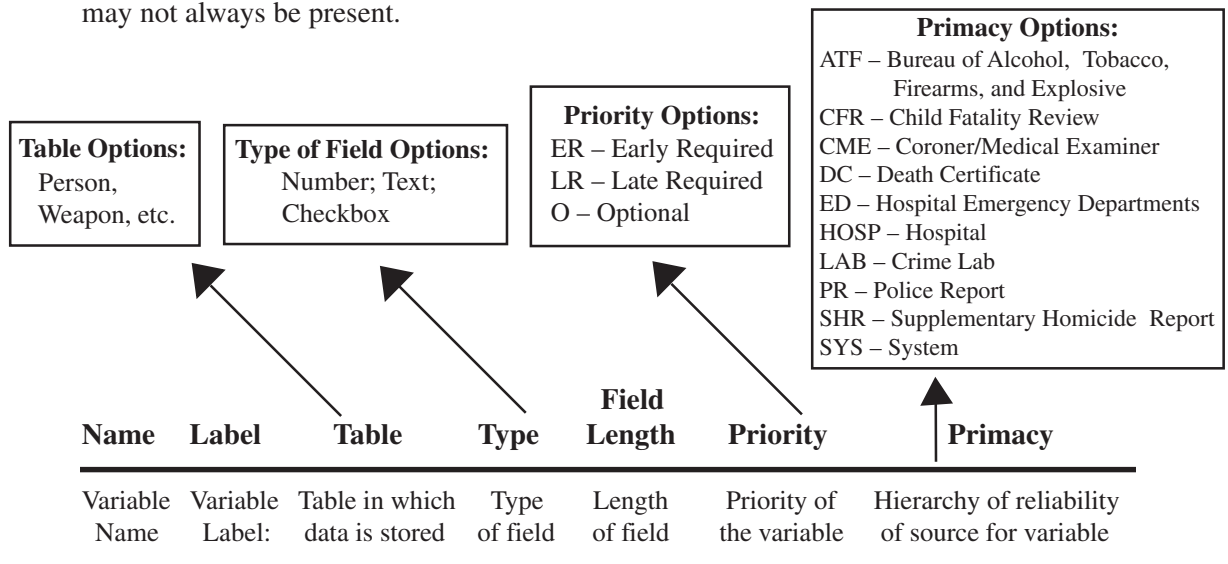
Discusses the uses of the data element or group of data elements.

Discussion

Provides guidance on how to code the data element or group of data elements.

Case Examples

Provides examples of data element, may not always be present.



Response Options:

Variable name

Pick list for variable

If this is blank, no drop-down menu is provided by the software for this variable

Data Standards and Guidelines

If data standards or guidelines do not exist, this section will be omitted.